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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,184	07/02/2006	Cesare Ponzone	2503-1174	2221

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YOUNG & THOMPSON
209 Madison Street
Suite 500
ALEXANDRIA, VA 22314

EXAMINER	
TOUSSAINT, DALILA	
ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/553,184	PONZONE ET AL.	
	Examiner	Art Unit	
	DALILA TOUSSAINT	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/13/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ansaldi et al. US patent 4956192**, in view of **Brunerie US patent 5705205**, and **Bartnick et al. US publication 2005/0074520 A1** and further in view of **Graves et al. US patent 2835591**.

a. Referring to claims 1-3, Ansaldi disclose a process for obtaining vanilla flavor by browning in two embodiments; one by successive stages of heating and drying the bean, which is a notoriously well known practice in vanilla processing, and the other by freezing and thawing of the vanilla beans (Ansaldi; column 1, line 21-34 and column 2, line 6-12). Ansaldi disclose heating the bean in an oven at 65 ºC and incubating at temperatures at 30 ºC- 40 ºC or, in its preferred embodiment, freezing mature green beans at temperatures between -5 ºC and -30 ºC and thawing the frozen bean in ambient temperature.

Ansaldi however, fail to disclose thawing at temperatures from 2 ºC to 8 ºC, however, Ansaldi disclose adding ethanol to the bean while frozen, and subsequently thawing the beans at different temperatures (Ansaldi; column 3, line 16-26).

Also, Ansaldi disclose that to optimize hydrolysis, one of ordinary skill in the art would adjust the speed of heating and the final temperature of the chamber used to thaw the beans (Ansaldi; column 2, line 40-49). "Where the general conditions of the claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235*

(CCPA). In this case, Ansaldi describes a workable range for thawing outside the instant claim range, but Ansaldi describes the general conditions of the claim, namely to optimize hydrolysis. It would not be inventive to discover the workable ranges by routine experimentation of the invention taught by Ansaldi.

Referring to claim 4-5, Ansaldi is silent to the hydroethanolic solutions of an alcoholic degree ranging from 20 to 80 %v/v, at temperatures ranging from room temperature to 80 ºC. Bartnick discloses an extraction step wherein the alcohol solution may vary about 30 to 80 vol. % alcohol and the extraction temperature of about 190 to 240 ºF (Bartnick; page 3, ¶ 0019-0020). To find a workable temperature range that would correspond to the alcohol-water concentration would have been well within the realm of ordinary skill in the art, as can be evidenced from the prior art applied here and instant claim 4.

Regarding the vanilla flavored product taught by Ansaldi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the extractions step in an alcoholic medium at temperatures of Bartnick. One would have been motivated to do so to improve and enhance flavor of vanilla extracts (Bartnick; page 10, ¶ 0069).

Referring to claims 1, 6-8, 11-15, and 20 Ansaldi disclose extraction with ethanol (Ansaldi; column 4, line 60) and the conventional process of hydrolysis of a glucoside with a β-glucosidase or by an acid in an aqueous medium (Ansaldi; column 1, line 46-53 and column 2, line 50-55).

However, the reference is silent to disclose purification of the vanillin-enriched concentrate, and the enzymatic system with cellulase and hemicellulase activities.

Brunerie discloses "preferably, the green vanilla pods are treated with an enzymatic system which comprises: (a) at least one enzyme capable of destroying the cell membrane systems of plant cells and is selected from an enzyme having pectinase activity and enzyme having cellulase activity and an enzyme having hemicellulase activity and mixtures thereof and (b) at least one enzyme possessing from about 10 to about 1000 units of a beta-glucosidase activity per gram of vanilla pods."(Brunerie; column 2, line 45-52)

Referring to claims 1, 9-10 and 16-19, in example 1, Brunerie disclose small doses of different enzymatic systems added to the vanilla pods with concentrations ranging from 0.008% to 0.1% of the pods, wherein the enzyme system processes at a temperature generally between 10 ºC and 60 ºC and an incubation period between 3 and 30 hours (Brunerie; column 3, line 14-18).

Regarding the vanilla flavored product taught by Ansaldi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the enzymatic system and aqueous-alcoholic medium of Brunerie. One would have been motivated to do so to

improve the production of natural vanilla flavor, treated by means of an enzymatic system capable of destroying the membrane systems of plant cells and of hydrolyzing the glucosides (Brunerie; column 1, line 61-65).

Although the reference teaches the beta-glucosidase activity in the enzymatic system of the claimed vanilla extract, it does not disclose, (claims 13-15) cellulase activity ranging from 2000 to 6000 IU/g. Bartnick also discloses reliance on enzymes with cellulase and β-glucosidase activity to extract vanilla from its bean (see ¶0022 in Bartnick), and therefore it appears that prior art was well aware of the usefulness of these enzymes in the extraction of vanilla. If, therefore, the activity of an enzyme was useful in its function, then to use an increased activity to obtain a better extraction would have been prima facie obvious. Since the Brunerie patent teaches up to 1000 units of activity, to use the same enzyme for its increased activity would have been an obvious modification. Furthermore, Brunerie teaches, "generally, it is clearly understood that the invention covers all the enzymatic systems, and especially those having a glucosidase activity, which make it possible to release the vanilla flavor potentially contained in the green vanilla pods. Persons skilled in the art will be able, using simple procedures (such as those for example illustrated in the examples which will be described following the present description), to

choose the enzymatic systems which are appropriate."

(see col. 2, line 35 to line 44)

Referring to claim 1, Ansaldi is silent in regard to purifying the product to a vanillin-enriched concentrate. However, Graves disclose in figure 1, filtering the enriched vanilla concentrate. Regarding the purification of the enriched concentrate, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the filtering steps of Graves (Graves; column 6). One would have been motivated to do so to obtain a final vanilla extract of richer flavor and aroma than previously obtained (Graves; column 6, 71-73).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DALILA TOUSSAINT whose telephone number is (571)270-7088. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. SAYALA/
Primary Examiner, Art Unit 1794

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